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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/493,579 01/28/00 HINCE

E GEO-3.0-001-

EXAMINER

IM52/0312

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Plaza 9 900 Route 9  
Woodbridge NJ 07095

REDDING, D  
ART UNIT

PAPER NUMBER

1744  
DATE MAILED:

03/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. 09/493,579	Applicant(s) HINCE ET AL.	
	Examiner David A Redding	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 53 and 58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- |  |  |
|--|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                 | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)        | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 20) <input type="checkbox"/> Other:  |

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 49,50-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 49,50,52,53, constitute process limitations and therefore it is indefinite in the manner in which these limitations, chemically or physically, further limit the compositions.

It is indefinite as to what compounds applicant considers to be equivalents to Fe(III)OH.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by MerK Index (pg. 4944).

The claim, as drafted, broadly defines a composition which includes, in whole or part with minerals containing Fe (III) including Fe(III)OH and equivalents thereof.

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The examiner interprets the language to be equivalent to define a markush group selected from minerals containing Fe(III), Fe(III)OH and equivalents thereof.

Iron III compounds are naturally occurring in the form of magnetite ( $\text{Fe}_2\text{O}_3$ ) and limonite( $\text{Fe}_3\text{O}_4$ ) and are considered, in the natural state, to read on the claims.

5. Claims 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of USP 5,508,194 (Lee); USP 5,620,893 (Hogan); USP 5,811,255 (Hunter).

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Applicants claims are drafted using the "open" language "comprising". Meaning that the claims do not preclude additional ingredients within the composition. The Lee patent discloses a nutrient composition which includes FeCl(III) (col.4, line 49).

The Hogen patent discloses adding a composition of Fe(III) in the form of magnetite to treat contaminated waters (col.13, lines 34-46). The patent to Hunter discloses adding a composition including Fe(III) for iron-reducing bacteria (col.23). Since the claims do not exclude additional ingredients in the composition, the compositions cited above are considered to read on applicants claims.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2/8/97. 7. Claims 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,299,613 (Cardarelli) or USP 5,582,627 (Yamashita) or USP 5,804,435 (Kurane) in view of the Merk Index.

Cardarelli discloses a nutrient composition containing manganese (IV) in the form of Manganese Chloride (col.18, Table X). The patent to Yamashita discloses a composition containing manganese nitrate (col.6). The patent to Kurane discloses a composition for microorganisms containing manganese chloride (col.6, lines 60). None of the patents disclose the source of the manganese. A review of the Merk Index reveals that the sources of manganese include pyrolusite. Accordingly, it would have been obvious to prepare the manganese compositions disclosed in the above-mentioned patents using manganese from pyrolusite in view of the fact that pyrolusite is a source of manganese.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Redding whose telephone number is 703-308-3910. The examiner can normally be reached on 8:00 - 4:30 Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on 703-308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-37718 for regular communications and 703-305-7719 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193.



David A Redding  
Primary Examiner  
Art Unit 1744

D.A.R.  
March 8, 2001